

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 92-048
NPDES NO. CA0005177

WASTE DISCHARGE REQUIREMENTS FOR:

FMC CORPORATION
PHOSPHORUS CHEMICALS DIVISION
NEWARK, ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. FMC Corporation, Phosphorus Chemicals Division, hereinafter called the discharger, by application dated November 20, 1991 has applied for reissuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES), from the facility located at 8787 Enterprise Drive, Newark.
2. The discharger manufactures phosphoric acid by burning elemental phosphorus, and phosphate products by processing phosphoric acid, sodium carbonate and potassium hydroxide. The facility also distributes hydrogen peroxide. The discharge consists of approximately 58,000 gallons per day (.058 mgd) of wastewater primarily consisting of cooling tower and boiler blowdown water, water softener regeneration brines and stormwater runoff. All wastewater is discharged into a ditch via a pond which is also part of a pH adjustment system. Treated wastewater travels about four thousand feet in the ditch prior to entering Plummer Creek Slough, a tributary to South San Francisco Bay and part of the San Francisco Bay National Wildlife Refuge.
3. The discharger is currently treating ethylene dibromide (EDB) contaminated groundwater by pumping water from extraction wells at this site. The extracted groundwater is treated by carbon absorption and discharged to the Union Sanitary District's sewer system. The discharger has the option to discharge treated groundwater to the effluent ditch.
4. The discharge is presently governed by Waste Discharge Requirements, Order No. 87-043 which allow discharge into South San Francisco Bay.
5. The U.S. Environmental Protection Agency (EPA) and the

Board have classified this discharge as a minor discharge.

6. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) in December 1991. The Basin Plan contains water quality objectives for South San Francisco Bay.
7. The beneficial uses of South San Francisco Bay are:
 - o Water contact recreation
 - o Non-contact water recreation
 - o Wildlife habitat
 - o Preservation of rare and endangered species
 - o Fish migration and spawning
 - o Industrial service supply
 - o Navigation
 - o Commercial and sport fishing
 - o Shellfish harvesting
 - o Estuarine habitat
8. Effluent limitations, toxic effluent standards, established pursuant to Section 301, 304, and 307 of the Clean Water Act and amendments thereto are applicable to the discharge.
9. Effluent limitation guidelines requiring the application of best available technology economically achievable (BAT) have not been promulgated by the U.S. Environmental Protection Agency for this type of phosphorus industry discharge. Effluent limitations of the Order are based on the Basin Plan, State Plans and Policies, current plant performance, and best professional judgement. The limitations are considered to be those attainable by BAT, in the judgement of the Board.
10. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21000 of Division 13) of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
11. The Board has notified the discharger and interested agencies and persons of its intent to reissue waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
12. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED THAT FMC Corporation in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. The discharge of all process wastes is prohibited. The discharge shall be limited to non-contact cooling water, boiler blowdown water, water softening regeneration brines, treated water from the EDB remedial measures program extraction/treatment system, deionizer regeneration brines from the hydrogen peroxide distribution center and stormwater runoff from the process and material transfer areas of the plant.
2. The discharge of wastewater from tank washing or pipe flushing operations to waters of the State is prohibited.
3. The discharge of phosphates and phosphate products, except as allowed for in this permit, solvents or products of petroleum origin to waters of the State is prohibited. Any spills of such materials shall be promptly cleaned up and prevented from mixing with precipitation runoff which discharges into waters of the State.
4. Chemicals used in any of the cooling towers for algae control or corrosion and deposition inhibition shall not contain zinc, chromium or other heavy metal constituents.
5. The first 50,000 gallons of drainage from the first major rainfall event of the wet weather season, from process or material transfer areas of the plant shall be contained but may be discharged upon documentation that the effluent limitations are met.

B. Effluent Limitations

1. The discharge shall not exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>30-day Average</u>	<u>Daily Maximum</u>
Total Phosphorus (as P)	mg/l	100	400
Settleable Matter	ml/l-hr	0.2	1.0

2. The pH of the discharge shall be between 6.5 and 8.5 pH units.

3. The effluent shall not contain ethylene dibromide (EDB) in detectable concentrations. Detectable concentrations shall be defined as 1.0 ug/l (ppb) in any sample. The effluent shall not contain other volatile organic compounds (VOC's) in concentrations greater than 5 ug/l per constituent nor total VOC's in concentrations greater than 50 ug/l. Compliance with this limitation may be demonstrated in the carbon treatment system effluent line.
4. In any representative set of samples, the waste as discharged shall meet the following limit of quality:

TOXICITY: The survival of organisms in a 96-hour bioassay in undiluted effluent shall not be less than a three sample median of 90 percent survival nor less than 70 percent survival in any single sample. Test organisms and methods shall be as specified in Chapter IV of the Basin Plan.

B. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
 - a. Dissolved Oxygen 5.0 mg/L minimum. Median of any

three consecutive months shall not be less than 80% saturation.

When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

b. pH Variation from natural ambient pH by more than 0.5 pH units.

c. Un-ionized ammonia 0.025 mg/L as N Annual Median
0.4 mg/L as N maximum.


3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Provisions

1. The discharger shall comply with all sections of this order immediately upon adoption.
2. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 87-043 adopted on May 20, 1987. Order No. 87-043 is hereby rescinded.
3. The discharger shall develop and implement a storm water pollution prevention plan in accordance with the State Water Resources Control Board General Industrial Stormwater Permit, Section A: Stormwater Pollution Prevention Plan. The plan shall be submitted to this office by October 1, 1992.
4. The discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

5. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.
6. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986, except items B.2 and C.8.
7. All applications, reports, or information submitted to the Regional Board shall be signed and certified pursuant to Environmental Protection Agency regulations (40 CFR 122.41K).
8. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this office.
9. Pursuant to Environmental Protection Agency regulations [40 CFR 122.42(a)] the Discharger must notify the Regional Board as soon as it knows or has reason to believe (1) that they have begun or expect to begin, use or manufacture of a pollutant not reported in the permit application, or (2) a discharge of a toxic pollutant.
10. This Order expires May 20, 1997. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.
11. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on May 20, 1992.


Steven R. Ritchie
Executive Officer

Attachments:

**Self Monitoring Program
Resolution 74-10**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

FMC CORPORATION
PHOSPHORUS CHEMICALS DIVISION

NEWARK, ALAMEDA COUNTY

NPDES NO. CA0005177

ORDER NO. 92-048

SMP CONSISTS OF

PART A

AND

PART B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

PART B. MONITORING SPECIFICATIONS

I. DESCRIPTION OF SAMPLING STATIONS

A. Effluent

<u>Station</u>	<u>Description</u>
E-1	At any point in the outfall between the point of discharge and the point at which all waste tributary to the outfall is present.
GT-1	Groundwater treatment system effluent line.

B. Receiving Waters

<u>Station</u>	<u>Description</u>
C-1	At a point in Plummer Creek, located approximately 200 feet downstream from the point of discharge.

II. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis shall be as follows:

<u>Station</u>	<u>Type of Sample</u>	<u>Analysis</u>	<u>Units</u>	<u>Freq- uency</u>
E-1	24 hour average	Flow	MGD	Daily
	Composite	Total Phosphate (as P)	mg/l	Weekly
	Grab	Settleable Matter	ml/l-hr	Daily
	Grab	Dissolved Oxygen	mg/l & saturation	Bi-weekly
	Grab	Turbidity	NTU	Bi-weekly
	Continuous	pH	pH units	Continuous
	Composite	Fish Bioassay	% survival	2/Year *

C-1	Grab	pH	pH Units	Monthly
	Grab	Dissolved Oxygen	mg/l & saturation	Monthly
	Grab	Turbidity	NTU	Monthly
GT-1	Grab	Volatile Organic Compounds including EDB and DCA	ug/l	Bi-Weekly #

* Twice per year. Once in March and once in September.
 # When treated groundwater is being discharged to the effluent ditch.

III. MODIFICATIONS OF PART A


Delete items D.1, D.2.c, D.2.g, D.3, D.5, E.e.1, E.3.b, F.3, F.5.

IV. MISCELLANEOUS REPORTING

Violations of any permit limitations shall be reported on the transmittal letter accompanying the self monitoring report together with actions taken or proposed actions to restore compliance.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing self-monitoring program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 92-048.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions may be ordered by the Executive Officer.


 Steven R. Ritchie
 Executive Officer

DATE ORDERED May 20, 1992